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/*
  Braxton Friend
  Java Project 1 : Coffee Purchases
  CS101-03
  10/15/2018, 10/16/2018, 10/17/2018
*/

import java.text.DecimalFormat;
import java.util.*;

public class CoffeePurchase
{
  /*main(args)
    initialize BAG_PRICE
    initialize LARGE_BOX_PRICE
    initialize MED_BOX_PRICE
    initialize SMALL_BOX_PRICE
    initialize BAGS_IN_LARGE
    initialize BAGS_IN_MED
    initialize BAGS_IN_SMALL
    keyBoard <-- Scanner object for System.in
    read customerName
    read day
    read month
    read year
    purchaseDate <-- SimpleDate object from month, day, year
    deliveryDate <-- SimpleDate object from month, day, year
    deliveryDate.nextDay()
    deliveryDate.nextDay()
    deliveryDate.nextDay()
    deliveryDate.nextDay()
    deliveryDate.nextDay()
    deliveryDate.nextDay()
    deliveryDate.nextDay()
    read poundsCoffeeDouble
    poundsCoffeeDouble <-- ceiling of poundsCoffeeDouble
    poundsCoffee <-- convert poundsCoffeeDouble to int
    bagsCoffee <-- (poundsCoffee + 1)/2
    coffeeCost <-- bagsCoffee * BAG_PRICE
    currentBags <-- bagsCoffee
    numberLargeBoxes <-- currentBags / BAGS_IN_LARGE
    currentBags <-- currentBags % BAGS_IN_LARGE
    numberMedBoxes <-- currentBags / BAGS_IN_MED
    currentBags <-- currentBags % BAGS_IN_MED
    numberSmallBoxes <-- (currentBags + 2) / BAGS_IN_SMALL
    largeBoxCost <-- numberLargeBoxes * LARGE_BOX_PRICE
    medBoxCost <-- numberMedBoxes * MED_BOX_PRICE
    smallBoxCost <-- numberSmallBoxes * SMALL_BOX_PRICE
    initialize MONEY_FORMAT
    priceFormat <-- construct DecimalFormat object from MONEY_FORMAT
    totalBoxCost <-- largeBoxCost + medBoxCost + smallBoxCost
    totalCostOfOrder <-- coffeeCost + totalBoxCost
    coffeeCostDisplay <-- format coffeeCost using priceFormat
    lgBoxDisplay <-- format largeBoxCost using priceFormat
    medBoxDisplay <-- format medBoxCost using priceFormat
    smBoxDisplay <-- format smallBoxCost using priceFormat
    totalCostDisplay <-- format totalCostOfOrder using priceFormat
    purchaseOrder <-- concatenate with labels all of customerName,
      purchaseDate, deliveryDate, bagsCoffee, coffeeCostDisplay,
      numberLargeBoxes, lgBoxDisplay, numberMedBoxes,
      medBoxDisplay, numberSmallBoxes, smBoxDisplay, totalCostDisplay
    print purchaseOrder
  */

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/*
Data Table for main(args)
Variable or Constant Type Purpose
args String [] parameter, unused
BAG_PRICE double current charge for 2 lb. Bag
LARGE_BOX_PRICE double current charge for large box
MED_BOX_PRICE double current charge for large box
SMALL_BOX_PRICE double current charge for large box
BAGS_IN_LARGE int number of bags in large box
BAGS_IN_MED int number of bags in medium box
BAGS_IN_SMALL int number of bags in small box
keyBoard Scanner input from keyBoard
customerName String name of customer
day int numeric day
month int numeric month
year int numeric year
purchaseDate SimpleDate record today's date
deliveryDate SimpleDate date order delivered to customer
poundsCoffeeDouble double numeric amount purchased
poundsCoffee int integer amount requested
bagsCoffee int number of bags purchased
coffeeCost double cost of coffee
currentBags int remaining bags, needed for box calculation
numberLargeBoxes int number of large boxes needed
numberMedBoxes int number of medium boxes needed
numberSmallBoxes int number of small boxes needed
largeBoxCost double cost of large boxes
medBoxCost double cost of medium boxes
smallBoxCost double cost of small boxes
MONEY_FORMAT String "$#,##0.00" for standard money format
priceFormat DecimalFormat object to format double to money String
totalBoxCost double total cost of boxes
totalCostOfOrder double total cost of order (coffee and boxes)
coffeeCostDisplay String cost of coffee as money String
lgBoxDisplay String cost of large boxes as money String
medBoxDisplay String cost of medium boxes as money String
smBoxDisplay String cost of small boxes as money String
totalCostDisplay String totalCostOfOrder as money String
purchaseOrder String String containing entire purchase order
*/

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public static void main(String [] args)
{
final double BAG_PRICE = 2.33;
final double LARGE_BOX_PRICE = 1.51;
final double MED_BOX_PRICE = .96;
final double SMALL_BOX_PRICE = .57;
final int BAGS_IN_LARGE = 12;
final int BAGS_IN_MED = 6;
final int BAGS_IN_SMALL = 3;

Scanner keyBoard = new Scanner(System.in);

System.out.println("What is your name?");
String customerName = keyBoard.nextLine();
System.out.println("Please enter the month as an integer.");
int day = keyBoard.nextInt();
System.out.println("Please enter the day as an integer.");
int month = keyBoard.nextInt();
System.out.println("Please enter the year as an integer.");
int year = keyBoard.nextInt();

SimpleDate purchaseDate = new SimpleDate(month, day, year);

SimpleDate deliveryDate = new SimpleDate(month, day, year);

deliveryDate.nextDay();
deliveryDate.nextDay();

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deliveryDate.nextDay();
deliveryDate.nextDay();
deliveryDate.nextDay();
deliveryDate.nextDay();
deliveryDate.nextDay();

System.out.println("How many LBS of coffee would you like?");
double poundsCoffeeDouble = keyBoard.nextDouble();
poundsCoffeeDouble = Math.ceil(poundsCoffeeDouble);
int poundsCoffee = (int)(poundsCoffeeDouble);
int bagsCoffee = (poundsCoffee + 1) / 2;
double coffeeCost = bagsCoffee * BAG_PRICE;

int currentBags = bagsCoffee;
int numberLargeBoxes = currentBags / BAGS_IN_LARGE;
currentBags = currentBags % BAGS_IN_LARGE;
int numberMedBoxes = currentBags / BAGS_IN_MED;
currentBags = currentBags % BAGS_IN_MED;
int numberSmallBoxes = (currentBags + 2) / BAGS_IN_SMALL;

double largeBoxCost = numberLargeBoxes * LARGE_BOX_PRICE;
double medBoxCost = numberMedBoxes * MED_BOX_PRICE;
double smallBoxCost = numberSmallBoxes * SMALL_BOX_PRICE;

final String MONEY_FORMAT = "$#,##0.00";
DecimalFormat priceFormat = new DecimalFormat(MONEY_FORMAT);

double totalBoxCost = largeBoxCost + medBoxCost + smallBoxCost;
double totalCostOfOrder = coffeeCost + totalBoxCost;

String coffeeCostDisplay = priceFormat.format(coffeeCost);
String lgBoxDisplay = priceFormat.format(largeBoxCost);
String medBoxDisplay = priceFormat.format(medBoxCost);
String smBoxDisplay = priceFormat.format(smallBoxCost);
String totalCostDisplay = priceFormat.format(totalCostOfOrder);

String purchaseOrder = ("Customer: \t\t\t\t" + customerName + "\nDate of Order: \t\t" +
    purchaseDate + "\nDate of Arrival: \t\t" + deliveryDate +
    "\n\nNumber of Bags Ordered: " + bagsCoffee + " . . . . " + coffeeCostDisplay +
    "\n\nBoxes Used: \t\t\t\t\t\t\t" + numberLargeBoxes + " Large . . . . " + lgBoxDisplay +
    "\n\t\t\t\t\t\t\t" + numberMedBoxes + " Medium . . . " + medBoxDisplay +
    "\n\t\t\t\t\t\t\t" + numberSmallBoxes + " Small \t . . . " + smBoxDisplay +
    "\n\nTotal cost of order: . . . . . " + totalCostDisplay);

System.out.println(purchaseOrder + "\nThank you for your JavaLumen Corporation coffee purchase!");

} //main
} //class CoffeePurchase

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